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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/659,777
Filing Date: September 10, 2003
Appellant(s): HAVERINEN, HENRY PETTERI

Eric M. Nichols, Reg. No. 57, 125
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 25, 2010 appealing from the Office action mailed April 09, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

LaPorta et al. (U.S. Patent Number: 6,654,359); Johansson et al. (U.S. Patent Application Number: 2002/0080752).

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 8, 13, 15-17, 19, 20, 24-28, 32 are rejected under 35 U.S.C. 102(e) as being unpatentable over **LaPorta et al. (U.S. Patent Number: 6,654,359)**.

Consider **claim 1**; LaPorta discloses a method, comprising: allocating a tunnel IP address for a tunnel to be formed for data transmission of a terminal connected to a first access device, to a corresponding host, to which tunneling IP address the tunnel is bound, and transferring at least the tunneling IP address from the first access device to a second access device (base station) in response to detecting a need to change the connection of the terminal to be carried out by the second access device (if the handoff is between base stations in the same domain, the same care of address/tunneling IP address is used) (column 10, lines 46-63).

Consider **claim 2**; LaPorta discloses tunnelling attributes, at least an IP address of the corresponding host and the tunnelling IP address allocated to the terminal in the first access device, are determined in an authentication server as a part of the authentication of the terminal before arranging the tunnel to the corresponding host, the tunnelling attributes are transferred to the first access device in response to a successful authentication (column 14, lines 61-63; column

16, line 63-column 17, line 12), the IP address used in the data transmission of the terminal and the tunnelling IP address for the tunnel to be formed for the data transmission of the terminal that is used as an end point of the tunnel transferring data of the terminal are allocated in the first access device to the terminal (column 14, lines 61-63; column 16, line 63-column 17, line 12), the tunnel determined by the tunnelling attributes is bound in the first access device to the tunnelling IP address, the tunnel, whose end points include the tunnelling IP address and the IP address of the corresponding host, is formed and thereafter the data transmission to the tunnelling IP address is transferred to a network interface of the first access device (column 14, lines 61-63; column 16, line 63-column 17, line 12).

Consider **claims 8, 24, 32**; LaPorta discloses that the first access device and the second access device are access points of a wireless local network connected to one another through a wired local network (column 2, lines 33-40).

Consider **claim 13**; LaPorta discloses an access device for a telecommunication network, wherein the access device is configured to provide a terminal with a connection, the access device is configured to allocate a tunnelling IP address for a tunnel to be formed for the data transmission of the terminal, to which tunnelling IP address the tunnel is bound the access device is configured to form the tunnel between a corresponding host and an access device for data transmission of the terminal (column 10, lines 46-63), and the access device is configured to send at least said tunnelling IP address to a second access device in response to detecting a need to change the connection of the terminal to be implemented by the second access device (column 10, lines 46-63).

Consider **claim 15**; LaPorta discloses that the access device is configured to change the binding of the tunnelling IP address to temporarily denote the network interface of the second access device (column 10, lines 46-63).

Consider **claim 16**; LaPorta discloses an access device for a telecommunication network comprising means for providing a terminal with a connection and means for forming a tunnel between a corresponding host and an access device for data transmission of the terminal (column 10, lines 46-63), wherein the access device is configured to receive at least a tunnelling IP address allocated for a tunnel for the data transmission of the terminal in response to detecting a need to change the connection of the terminal to be implemented by the access device (column 10, lines 46-63), the access device is configured to form a binding between the tunnelling IP address and the network interface, and the access device is configured to update the information concerning the new binding between the network interface and the tunnelling IP address to at least one network node included in the system (column 10, lines 46-63).

Consider **claims 17, 20, 27**; LaPorta discloses that the access device is configured to transfer data after updating between the terminal and the corresponding host using the binding formed (column 5, lines 13-21; column 10, lines 46-63).

Consider **claim 19;** LaPorta discloses a communication apparatus comprising a processor and memory, wherein the apparatus is configured to form a tunnel between a corresponding host and an apparatus for data transmission of a terminal (column 5, lines 13-21; column 10, lines 46-63), the apparatus is configured to receive at least a tunneling IP address allocated for a tunnel for the data transmission of the terminal in response to detecting a need to change the connection of the terminal to be implemented by the apparatus (column 10, lines 46-63), the apparatus is

configured to form a binding between the tunneling IP address and the network interface (column 10, lines 46-63), and the apparatus is configured to update the information concerning the new binding between the network interface and the tunneling IP address to at least one network node included in the system (column 10, lines 46-63).

Consider **claims 25, 28**; LaPorta discloses that the network node is a router in a local network (column 5, lines 13-21).

Consider **claim 26;** LaPorta discloses a method comprising: receiving at least a tunneling IP address allocated for a tunnel for data transmission of a terminal in response to detecting a need to change the connection of the terminal to be implemented by a second access device (column 10, lines 46-63), forming a binding between the tunneling IP address and a network interface of the second access device, and updating the information concerning the new binding between the network interface and the tunneling IP address to at least one network node included in the system of the terminal (column 10, lines 46-63).

Claims 6, 7, 14, 18, 21-23, 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **LaPorta et al. (U.S. Patent Number: 6,654,359)** in view of **Johansson et al. (U.S. Patent Application Number: 2002/0080752).**

Consider **claims 6, 22, 30**; LaPorta discloses the claimed invention except: the information concerning the new binding is sent to at least one network node connected to the first access device and to the second access device to the routing table thereof using a Neighbour Discovery protocol.

In an analogous art, Johansson discloses that the information concerning the new binding is sent to at least one network node connected to the first access device and to the second access device to the routing table thereof using a Neighbour Discovery protocol (neighbor advertisement) (paragraph 18; paragraph 79, lines 1-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of LaPorta by including neighbor advertisement, as taught by Johansson, for the purpose of optimizing routing techniques.

Consider **claims 7, 18, 21, 23, 31**; Johansson discloses that the information concerning the new binding is sent to at least one network node connected to the first access device and to the second access device to an ARP table (Address Resolution Protocol) thereof using an ARP protocol (paragraph 79, lines 1-6).

Consider **claims 14, 29**; Johansson discloses that the binding refers to the binding between a MAC address of the network interface and the tunnelling IP address (paragraph 86).

(10) Response to Argument

Appellant's argument is that the prior art, as applied in the final rejection mailed 12/30/08, fails to provide for "transferring at least the tunneling IP address from the first access device to a second access device in response to detecting a need to change the connection of the terminal to be carried out by the second access device."

The examiner maintains that the claim limitations, as broadly recited, read on the prior art as follows:

LaPorta discloses maintaining the care of address (also known as IP address) [col. 7] (lines 41-43), [col. 10] (lines 56-59) by transferring (or handing off) the care of address among the base stations (access devices) associated with a domain [col. 7] (lines 41-47), [col. 10] (lines 52-59). The care of address (IP address) is used to tunnel packets to the mobile device [col. 10] (lines 52-55).

Appellant argues that LaPorta discloses that the base station merely transmits an acknowledgement, therefore does not teach transferring tunneling address from an old/first access device to a new/second access device.

LaPorta discloses that a home agent is implemented in a node or router and tunnels packets for delivery to the mobile device [col. 5] (lines 18 and 19), base stations include the capabilities associated with routers [col. 5] (lines 27-32), the home agent can be implemented in any local router or node including base stations [col. 8] (lines 18-22), so that when the mobile device moves about within a domain the mobile device's IP address remains unchanged [col. 8] (lines 42-48) and can still receive packets destined for the device as disclosed above.

Appellant argues that LaPorta's home agent, or the care-of-address, is not an access device connected to a terminal.

LaPorta discloses, as stated above, that a home agent is implemented in a node or router and tunnels packets for delivery to the mobile device [col. 5] (lines 18 and 19), base stations include the capabilities associated with routers [col. 5] (lines 27-32), the home agent can be implemented in any local router or node including base stations [col. 8] (lines 18-22), so that when the mobile device moves about within a domain the mobile device's IP address remains unchanged [col. 8] (lines 42-48) and can still receive packets destined for the device.

Appellant argues the combination of LaPorta and Johansson e.g. that the system supports an IPv6 protocol thereof using a Neighbor Discovery protocol.

The examiner maintains that Neighbor Discovery Protocol involves the transmission of an unsolicited neighbor advertisement message (appellant's specification page 13, lines 18-20). Johansson discloses the discovery of other nodes through the agent advertisement procedure [par. 18] in order to maintain reachability. As stated above, LaPorta discloses the transfer of the tunneling IP address from one access device to another [col. 7] (lines 41-47), [col. 10] (lines 52-59). LaPorta and Johansson both deal with a way to optimize Mobile IP, LaPorta [col. 3] (lines 15-22); Johansson [par. 1] (lines 1-5).

Appellant argues the combination of LaPorta and Johansson e.g. that the system supports IPv4 protocol thereof using an address resolution protocol.

The examiner maintains that Address Resolution Protocols (ARP) are well known in the art as shown by Johansson [par. 79] (lines 1-6). As stated above, LaPorta discloses the transfer of the tunneling IP address from one access device to another [col. 7] (lines 41-47), [col. 10] (lines 52-59). LaPorta and Johansson both deal with a way to optimize Mobile IP, LaPorta [col. 3] (lines 15-22); Johansson [par. 1] (lines 1-5).

Appellant argues the combination of LaPorta and Johansson e.g. binding refers to the binding between a MAC address of the network interface and the tunneling IP address.

The examiner maintains that Johansson discloses a binding between the MAC address of the network interface and tunneling IP address [par. 86] (lines 9-12). As stated above, LaPorta discloses the transfer of the tunneling IP address from one access device to another [col. 7] (lines

41-47), [col. 10] (lines 52-59). LaPorta and Johansson both deal with a way to optimize Mobile IP, LaPorta [col. 3] (lines 15-22); Johansson [par. 1] (lines 1-5).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Joel Ajayi/

Examiner, Art Unit 2617

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